



## Screw-Type Spindle Flowmeter

for viscous media

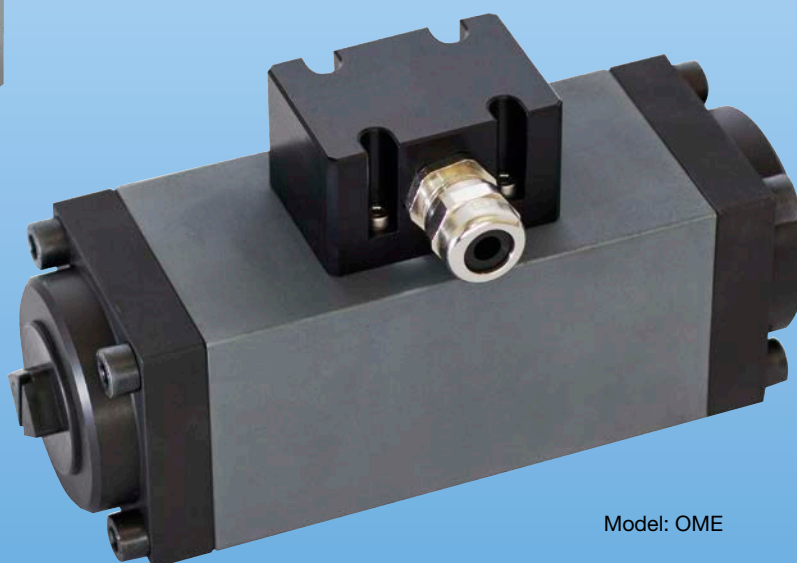


measuring  
•  
monitoring  
•  
analysing

OME



Model: ADI-1..



Model: OME

- Measuring ranges: 0.1 - 10 ... 3.5 - 350 l/min oil
- Measuring accuracy:  $\pm 0.1\%$  of reading
- $p_{\max}$ : 40 bar;  $t_{\max}$ : 125 °C
- Viscosity range: 1 ... 5000 mm<sup>2</sup>/s
- Connection: G 1/2 ... G 1 1/2 female, flange DN 15 ... DN 40
- Material: aluminium
- Output: pulses
- Economical
- Low-noise
- Pulsation-free principle of measurement



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**Application**

The Kobold screw-type volumetric flowmeter has proven itself in many applications over a long period of time; it has now been extended with an economical alternative - the OME type series - for the economical measurement or batching of viscous media.

These measuring sensors have been designed for viscous, non-abrasive media of 1-5000 mm<sup>2</sup>/s; they have been introduced as a response to today's innovative metrology and its demands for greater accuracy and reliability.

The screw-type volumetric meter works with the principle of positive displacement. Two cycloidal spindles, whose rotation is sensed by one or two sensors, are at the heart of the flowmeter. A new technique has been patented to sense the spindles directly, thus providing a compact and economical volumetric meter. The axial flow of the forced measured medium causes the pair of spindles to rotate in a uniform, non-pulsating manner.

The spindles have been manufactured with extreme precision. They are supported at their ends by ball bearings. The pair of spindles form volumetrically defined measuring chambers, which are a measure of the delivered volumetric flow. These unit volumes are evaluated by downstream electronics.

A double pulse generator can be used for direction sensing and doubling the pulses of pulse generator.

**Technical Details**

Max. pressure: 40 bar  
 Operating temperature: -20 °C ... +125 °C  
 Accuracy: ±0.1 % of reading  
 Viscosity: 1 ... 10<sup>6</sup> mm<sup>2</sup>/s

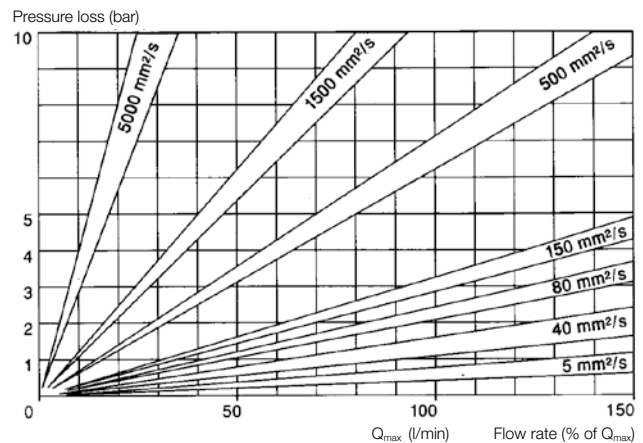
**Materials (media-contacting)**

Housing: aluminium (material no. 3.0615)  
 Spindles: nitrated steel  
 O-rings: FPM  
 Bearings: deep-grooved ball bearing  
 Flange: aluminium (material no. 3.0615)  
 Filter: ≤300 µm

**Double pulse generator**

Model BEG 60/BEG 61/BEG 62  
 Push-Pull, 10-30 V<sub>DC</sub>  
 -20 ... +125 °C  
 protection IP 65  
 temperature sensor PT100,  
 Class B, 3-wire

**Pressure Loss Diagram**



**Order Details** (Example: OME-15R15 /60)

| Flow rate<br>(Q <sub>min</sub> ... Q <sub>nominal</sub> )<br>[l/min] | Connection <sup>1)</sup><br>G | Impulse/l <sup>2)</sup> | Frequency <sup>2)</sup><br>at Q <sub>nominal</sub><br>[Hz] | Model     | Double pulse generator |
|--|-------------------------------|-------------------------|--|-----------|------------------------|
| 0.1 ... 10   | G ½                           | 1214                    | 202  | OME-15R15 | /60 = BEG 60           |
| 0.3 ... 30   | G ¼                           | 321                     | 161  | OME-20R20 | /61 = BEG 61           |
| 1 ... 100  | G 1                           | 78                      | 130  | OME-25R25 | /62 = BEG 62           |
| 3.5 ... 350  | G 1 ½                         | 17.73                   | 104  | OME-40R40 | /62 = BEG 62           |
| 0.1 ... 10   | DIN flange DN 15              | 1214                    | 202  | OME-15F15 | /60 = BEG 60           |
| 0.3 ... 30   | DIN flange DN 20              | 321                     | 161  | OME-20F20 | /61 = BEG 61           |
| 1 ... 100  | DIN flange DN 25              | 78                      | 130  | OME-25F25 | /62 = BEG 62           |
| 3.5 ... 350  | DIN flange DN 40              | 17.73                   | 104  | OME-40F40 | /62 = BEG 62           |

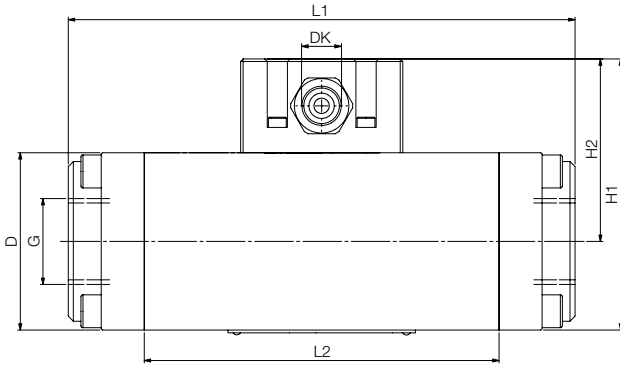
<sup>1)</sup> Other connections upon request

<sup>2)</sup> Please refer to the accompanying test certificate for exact values.

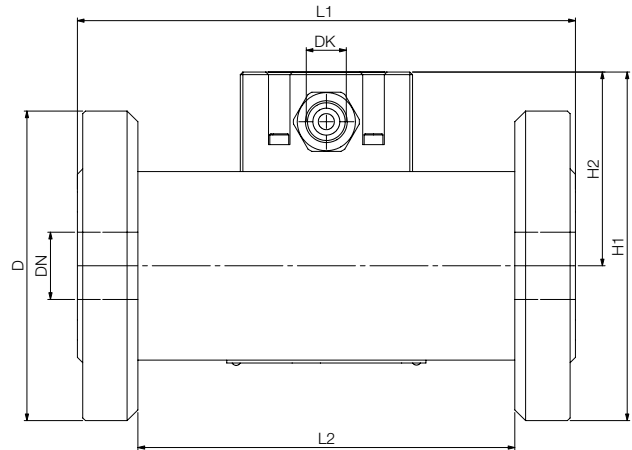
Upon request, flow rates may deviate by up to ±50 % depending on viscosity and accuracy.

**Dimensions and Weights**

OME with BSPP thread



OME with DIN flange



| Model  | D [mm]  | L1 [mm] | L2 [mm] | H1 [mm] | H2 [mm] | Weight [kg] |
|--------|---------|---------|---------|---------|---------|-------------|
| OME-15 | 45x45   | 110     | 65      | 82      | 59,5    | 0,7         |
| OME-20 | 55x55   | 145     | 95      | 92      | 64,5    | 1,2         |
| OME-25 | 70x70   | 200     | 140     | 107     | 72,0    | 3,0         |
| OME-40 | 110x110 | 310     | 225     | 147     | 92,0    | 9,0         |

| Model  | D [mm] | L1 [mm] | L2 [mm] | H1 [mm] | H2 [mm] | Weight [kg] |
|--------|--------|---------|---------|---------|---------|-------------|
| OME-15 | 95     | 105     | 65      | 107,0   | 59,5    | 2           |
| OME-20 | 105    | 135     | 95      | 117,0   | 64,5    | 2           |
| OME-25 | 115    | 185     | 140     | 129,5   | 72,0    | 4           |
| OME-40 | 150    | 325     | 225     | 167,0   | 92,0    | 12          |